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## Gender Differences in Subjective Experience and Treatment of Bipolar Disorder

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### Abstract

Treatment nonadherence is a leading cause of poor outcomes among populations with bipolar disorder (BD) and is related to subjective experience of illness and treatment. This study examined gender differences in the experience of illness and treatment for those with BD, specifically in regards to treatment adherence. This cross-sectional analysis pooled data from 3 BD studies. A semistructured qualitative instrument, the Subjective Experience of Medication Interview, elicited information on subjective differences in treatment adherence between men and women. Men and women experience comparable levels of stigma and they comparably value lessened irritability and/or impulsivity because of medications. However, men and women differed in fear of weight gain because of medications, value of social support, and self-medication behaviors. Selected differences in subjective illness experience between men and women might be used to inform gender-sensitive approaches to enhance treatment adherence among populations with BD.

### Keywords

Bipolar disorder; treatment adherence; gender differences

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A variety of factors have been identified as relevant to treatment adherence in bipolar disorder (BD) populations. One important factor is gender, which seems to be related to subjective experience of illness and treatment (Hammen, 1992; Jenkins, 1997; Tohen et al., 1998). This difference may be due to higher comorbidity of other conditions and rates of diagnoses for women with BD, as well as and biological/hormonal, and possibly psychosocial factors (Sprock and Yoder, 1997). However, very little research has been done specifically on gender differences in subjective experience of illness among populations with BD.

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A good subjective experience of illness has been proven to be a major and effective motivator for patients to adhere to their treatment plan (Cochran and Gitlin, 1998; Connelly et al., 1982; Greenhouse et al., 2000; Warner et al., 1989), whereas a poor subjective experience of illness often leads to lowered treatment adherence (Greenhouse et al., 2000). Subjective experience of illness includes factors such as level of social support, experience of positive or negative medication effects, and perceived stigma. Past research has shown that women are especially affected by factors such as concern about weight gain, a possible negative side effect of medication (Franzoi and Koehler, 1998), and by desire for more social support than men (Leskelä et al., 2008).

An additional factor that can affect treatment adherence is drug and alcohol abuse as a form of self-medication. This is an especially important factor considering that individuals with BD, when compared with individuals with other mental illnesses, have one of the highest rates of comorbid drug and alcohol abuse (Dixon et al., 1991; Tohen et al., 1998). Consistent with patterns in the general population, men with BD have higher rates of substance abuse than women with BD and may additionally have more problems with violence (Baldassano, 2006).

This cross-sectional study assessed gender differences and similarities in the experience of illness and treatment for men and women with BD, specifically in regards to how these differences might affect treatment adherence. We anticipated few gender differences in perceived stigma but anticipated gender differences in weight gain concern because of medication (more in women, encouraging nonadherence), value of social support (higher value in women, encouraging adherence), self-medication (more in men, encouraging nonadherence), and value of lessened irritability and/or impulsivity because of medication (higher in men, encouraging adherence).

## METHOD

### Participants

Ninety individuals with BD participated in this study. The participants were either referred by clinicians or volunteered in response to Institutional Review Board-approved advertisements of the study at BD treatment centers. These participants were recruited while receiving treatment for their BD through an academic medical center Mood Disorders Clinic ( $N = 20$ ), a community mental health clinic ( $N = 20$ ), a private hospital or clinic ( $N = 20$ ), or a state hospital ( $N = 30$ ). Inclusion requirements for participation included being at least 18 years, having a diagnosis of BD type I as confirmed by the Mini-International Neuropsychiatric Interview (MINI) (Sheehan et al., 1998), taking mood-stabilizing medication for at least 6 months previous to this study, and the ability to give informed consent for the study. To increase results generalizability, comorbidity was not an exclusion criterion. Mean age of the group was 36.5 years, 51% ( $N = 46$ ), male. Mean age of BD onset was 26.5 years. The majority ( $N = 66$ , 73%) were Euro-American, whereas ~16% ( $N = 14$ ) were African-Americans.

### Measures

**Subjective Experience of Medication Interview**—Assessment of illness experience consisted of the Subjective Experience of Medication Interview (SEMI), a semi-structured qualitative evaluation of subjective experience of mental illness (Jenkins, 1997), which requires 60 to 120 minutes to administer. The SEMI has been modified for use in populations with BD (Sajatovic et al., 2009). Illness experience domains assessed in the SEMI include illness attitudes, attributions and behaviors, social relations, treatment history

and medication experience (including a checklist of side effects from medications), self-medication, quality of life, stigma, culture/ethnicity, and healthcare logistics.

### Diagnostic Assessment

**Mini-International Neuropsychiatric Interview**—The MINI was used to verify the participants' diagnoses of BD. MINI items J and K were used to assess and identify current substance abuse.

### Data Analysis

The SEMI was transcribed from the audiotapes in its entirety and entered into a software program, Atlas.ti (Scientific Software Development, 1997), to code and analyze qualitative data systematically (Luborsky, 1993; Good, 1994). The SEMI was conducted by research staff trained in its use and monitored through random reviews of tape-recorded interviews/transcripts by another member of the research team.

Data from the semi-structured interview was evaluated in a categorical fashion for a series of narrowly defined questions. Group means were calculated for each variable and compared to look for a significant between-group difference with significance set at a level of 0.05. A  $\chi^2$  test for 2 independent samples was used to look for a main effect of gender on these different factors of treatment adherence. Because there is minimal information published on subjective experience of illness and gender differences in BD, we did not correct for multiple comparisons in this preliminary study.

**Weight Gain**—Individuals were uniformly queried as to whether they have experienced weight gain related to psychotropic treatments and if so, if that was their most worrisome side effect. Responses for each question were coded either in the affirmative or negative (yes/no).

**Stigma**—Individuals were queried on specific experiences of stigma related to having a mental disorder. Responses were coded as described above for weight gain (yes/no). Questions were used to elicit information about self and public stigma, including public stigma as a part of ethnic group identity.

**Treatment Effects on Irritability/Impulsivity**—Individuals were queried regarding their perceived effect of medication and responses were used to evaluate for irritability and impulsivity. Participants were asked, "What is the best thing the medications do for you?" and "If a medication could do anything, what would you want it to do?" Responses were coded as "present" or "absent."

**Social Support**—Individuals were queried regarding their social relationships and support network. Questions were used to assess social support in the domains of contact with friends, reaction by friends to illness, and assistance with problems from friends. A positive answer for any of these 3 domains indicated positive social support, yielding a 0 to 3 score for social support.

## RESULTS

This preliminary evaluation of illness experience domains known to be relevant to treatment adherence in populations with BD found that men and women did not show significant differences in self-stigmatizing attitudes [ $\chi^2$  (2,  $N = 80$ ) = 1.166,  $p = 0.558$ ], perception of public stigma [ $\chi^2$  (2,  $N = 87$ ) = 1.644,  $p = 0.439$ ], or in experience of any stigma [ $\chi^2$  (1,  $N = 86$ ) = 0.04,  $p > 0.05$ ]. Men and women did not vary significantly in perceived weight gain

$[\chi^2 (1, N = 87) = 1.368, p = 0.242]$ , but women had more concern than men about weight gain  $[\chi^2 (1, N = 42) = 4.497, p = 0.034]$ . Women who experienced weight gain were nearly twice as likely as men to report this as the most worrisome medication related side effect.

The data for value of social support yielded somewhat unexpected results in that men and women did not vary significantly in reporting having social support  $[\chi^2 (1, N = 89) = 1.257, p = 0.262]$ . However, when the social support score for those participants was taken into consideration, women reported significantly higher quality in these relationships  $[\chi^2 (2, N = 76) = 8.914, p = 0.012]$ .

The data for substance abuse revealed that men with BD are more likely than women to abuse alcohol  $[\chi^2 (1, N = 83) = 5.426, p < 0.025]$ . Although men and women did not vary in rates of drug abuse  $[\chi^2 (1, N = 83) = 1.233, p > 0.05]$ , there were relatively high rates of drug abuse among both genders (26.3% of women and 37.8% of men).

Results for value of lessened irritability and impulsivity were also unexpected. Men and women did not vary significantly in their reports of lessened irritability and/or impulsivity due to psychiatric medications ( $p = 0.869$ ). However, because participants were not directly queried about irritability and impulsivity, it was not possible to ascertain from their free responses if irritability and impulsivity were affected by treatment for BD among all study participants.

## DISCUSSION

This cross-sectional analysis of subjective experience of illness and treatment among men and women with BD found no gender differences in the experience of stigma, self-medicating through drug abuse, or value of lessened irritability and impulsivity because of medications. However, this sample of women experienced more fear of weight gain because of medications, had higher quality social relationships, and had lower rates of self-medicating through alcohol abuse. These results can potentially inform gender sensitive approaches to improve illness experience and adherence enhancement. For example, practitioners and researchers could incorporate treatment approaches that address women's fears of weight gain and high value on quality social support and both genders' susceptibility to both perceived stigma and self-medication to currently used psychotherapies (Craighead and Microwatts, 2000).

Manualized psychotherapies for individuals with BD, such as the Life Goals Program by Bauer and McBride (2003), emphasize the importance of a personal risk-benefit analysis as a driver of illness self-management. Individuals with BD who fear weight gain and thus may be at risk for future treatment nonadherence might be engaged early in treatment to address this important issue and minimize the often disastrous consequences of partial or nonadherence.

It seems that women with BD place higher value on social support (possibly only maintaining relationships that they highly value), whereas men with BD have relationships that are perceived to be of lower quality. These more meaningful women's relationships may show that women rely on strong social support as a coping mechanism for BD, a positive factor in treatment adherence. Given the importance of existing social support for women, it may be particularly critical to involve significant and supportive others in the woman's social network in treatment. For men, who may have less perceived high-quality social supports, adjunctive social networks such as group therapies or advocacy initiatives (web based or in person) might be particularly helpful.

In light of the data presented here, some possibilities for gender-sensitive treatment plans for women might include therapy that addresses specific physical side effects/body image concerns and involves close friends and family, whereas men might particularly benefit from support groups. Both men and women may also benefit from therapy that addresses the issue of stigma associated with mental illness. Including information about how self-medicating with substances can decrease the effectiveness of BD treatments and treating for comorbid substance abuse may be beneficial.

A limitation of this analysis is that it is based on data from a relatively small, ethnically mixed sample and exclusively used self-report. Given the exploratory/preliminary nature, there was no adjustment for multiple comparisons. Future research should include additional ways to collect data on subjective illness experience, including comprehensive and standardized measures of key factors (e.g., stigma and medication side effect burden) and using a larger and more diverse sample. Also, it would be useful to control for the types of mood-stabilizing medications that participants are taking, so that possible side effects such as the ones examined in this study are equally likely for each participant. The population studied included individuals with comorbidity, particularly substance abuse. Although participants with comorbid conditions were included in this study to increase generalizability, it may be useful in future studies to examine participants with BD uncomplicated by substance abuse comorbidity.

## CONCLUSIONS

There are selected differences in subjective illness experience between men and women with BD that can potentially inform treatment approaches that might improve adherence. Future research needs to focus on creating effective gender-sensitive approaches to increase the positive aspects of treatment and illness experience, including motivating factors in treatment adherence.

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